

***LineUp With Math™* Alignment**
Kansas Curricular Standards for Mathematics
Jan 31, 2004

Standard 1: Number and Computation

Number and Computation – The student uses numerical and computational concepts and procedures in a variety of situations.

Benchmark 3: Estimation – The student uses computational estimation with rational numbers and the irrational number pi in a variety of situations.

<p><i>Sixth Grade Knowledge Base Indicators</i> The student...</p> <p>4. determines the appropriateness of an estimation strategy used and whether the estimate is greater than (overestimate) or less than (underestimate) the exact answer and its potential impact on the result (2.4.K1a)</p>	<p><i>LineUp With Math™</i> Activities</p> <p>--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.</p>
<p><i>Sixth Grade Application Indicators</i> The student...</p> <p>2. estimates to check whether or not the result of a real-world problem using rational numbers is reasonable and makes predictions based on the information) (2.4.A1a)</p>	<p><i>LineUp With Math™</i> Activities</p> <p>--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.</p>
<p>4. determines if a real-world problem calls for an exact or approximate answer and performs the appropriate computation using various computational methods including mental math, paper and pencil, concrete objects, or appropriate technology (2.4.A1a)</p>	<p>--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.</p>

Standard 2: Algebra

Algebra – The student uses algebraic concepts and procedures in a variety of situations.

Benchmark 4: Models – The student generates and uses mathematical models to represent and justify mathematical relationships in a variety of situations.

<p><i>Sixth Grade Knowledge Base Indicators</i> The student...</p> <p>2. uses one or more mathematical models to show the relationship between two or more things.</p>	<p><i>LineUp With Math™</i> Activities</p> <p>--Use an interactive simulator to identify distance, rate, time conflicts in air traffic control problems and resolve the conflicts by varying plane speeds.</p>
<p><i>Sixth Grade Application Indicators</i> The student...</p> <p>1. recognizes that various mathematical models can be used to represent the same problem situation. Mathematical models include:</p>	<p><i>LineUp With Math™</i> Activities</p> <p>--Use an interactive simulator to identify distance, rate, time conflicts in air traffic control problems and resolve the conflicts by varying plane speeds.</p>

<p>a. process models (concrete objects, pictures, diagrams, number lines, hundred charts, measurement tools, multiplication arrays, division sets, or coordinate planes/grids) to model computational procedures and mathematical relationships and to solve equations;</p> <p>f. function tables (input/output machines, T-tables) to model numerical and algebraic relationships;</p> <p>k. graphs using concrete objects, frequency tables, bar graphs, line graphs, circle graphs, Venn diagrams, line plots, charts, tables, and single stem-and-leaf plots to organize and display data, explain, and interpret data</p>	<p>--Explore and apply a variety of strategies to optimize the solution of air traffic control conflicts.</p>
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Standard 3: Geometry

Geometry – The student uses geometric concepts and procedures in a variety of situations.

Benchmark 2: Measurement and Estimation – The student estimates, measures, and uses measurement formulas in a variety of situations.

<p><i>Sixth Grade Knowledge Base Indicators</i> The student...</p> <p>1. determines and uses whole number approximations (estimations) for length, width, weight, volume, temperature, time, perimeter, and area using standard and nonstandard units of measure (2.4.K1a)</p>	<p><i>LineUp With Math™ Activities</i></p> <p>--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.</p>
<p>2. selects, explains the selection of, and uses measurement tools, units of measure, and degree of accuracy appropriate for a given situation to find accurate rational number representations for length, weight, volume, temperature, time, perimeter, area and angle measurements. (2.4.K1a)</p>	<p>--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.</p>
<p><i>Sixth Grade Application Indicators</i> The student...</p> <p>3. estimates to check whether or not measurements or calculations for length, width, weight, volume, temperature, time, perimeter, and area in real-world problems are reasonable and adjusts original measurement or estimation based on additional information (a frame of reference) (2.4.A1a)</p>	<p><i>LineUp With Math™ Activities</i></p> <p>--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.</p>